CLAIMS

WE CLAIM:

1. A communication network operating to support voice and data communication within a premises, said communication network comprising:

a plurality of mobile network devices having a buffer that stores incoming digital voice information for a predetermined queuing period before beginning voice reproduction from the stored digital voice information;

a stationary network device;

a wireless network that is used by each of said plurality of mobile network devices to selectively exchange voice and data packets with others of the plurality of mobile network devices;

a hardwired network connected to both said stationary network device and said wireless network;

said hardwired network being used to route voice and data packets between said stationary network device and said plurality of mobile network devices which participate via said wireless network;

a telephone, connected to said stationary network device, that captures, delivers, receives and reproduces voice in an analog voice stream form;

said stationary network device having a buffer that stores digital voice information received from said wireless network for a predetermined queuing period before converting the stored digital voice information into an analog voice stream and delivering the analog voice stream to said telephone; and

said stationary network device converts analog voice streams received from said telephone into voice packets for delivery via said hardwired and wireless networks to a selected one of said plurality of mobile network devices.

2. The communication network of claim 1 wherein the predetermined queuing period is determined through examining delays found in test signal routing.

3. The communication network of claim 1 wherein said stationary network device is a computer.

4. The communication network of claim 1 wherein said wireless network utilizes a polling protocol and spanning tree routing.

5. The communication network of claim 1 wherein said stationary network device provides call setup assistance for said telephone.

6. The communication network of claim 1 further comprising:

a telephone switching network connected to said stationary network device; and

said stationary network device selectively routes analog voice streams received from said telephone onto said telephone switching network, and said stationary network device selectively routes analog voice streams received from said telephone switching network to said telephone.

7. A communication network located within a premises for supporting voice and data exchanges, said communication network comprising:

a plurality of portable terminals, each having a wireless transceiver;

each of said plurality of portable terminals capture voice in an analog voice stream form and generate therefrom digital voice packets, and each of said plurality of portable terminals receive digital voice packets, generate therefrom analog voice streams, and reproduce voice from the analog voice streams;

each of said plurality of portable terminals capture data and generate therefrom data packets, and each of said plurality of portable terminals receive data packets and reproduce data from the data packets received;

a plurality of access devices, each having a wireless transceiver; and

said plurality of access devices using a polling protocol to manage wireless routing of data and voice packets within the premises among said plurality of portable terminals.

8. The communication network of claim 7 wherein said plurality of access devices utilize spanning tree routing for both data and voice packets.

9. The communication network of claim 7 further comprising:

a telephone, connected to one of said plurality of access devices, that captures, delivers, receives and reproduces voice in an analog voice stream form;

said one of said plurality of access devices selectively converting digital voice packets received into an analog voice stream for delivery to said telephone for reproduction; and

said one of said plurality of access devices selectively converting analog voice streams received from said telephone into digital voice packets for delivery to one of said plurality of portable terminals.

10. The communication network of claim 9 further comprising:

a telephone switching network connected to said one of said plurality of access devices;

said one of said plurality of access devices selectively routes analog voice streams received from said telephone through said telephone switching network; and

said one of said plurality of access devices selectively routes analog voice streams received from said telephone switching network to said telephone.

11. The communication network of claim 10 wherein said one of said access devices provides call setup assistance for said telephone.

12. The communication network of claim 10 wherein said one of said access devices stores incoming digital voice packets for a queuing time period before converting the digital voice packets into an analog voice stream form.

13. The communication network of claim 7 further comprising:

a telephone switching network connected to one of said plurality of access devices;

said one of said plurality of access devices selectively converts digital voice packets received into an analog voice stream form for routing through said telephone switching network; and

said one of said plurality of access devices selectively converts analog voice streams received from said telephone switching network into digital voice packets for routing to select ones of said plurality of portable terminals.

14. The communication network of claim 13 wherein said one of said access devices selectively provides call setup assistance to interface with said telephone switching network.

15. A communication network for supporting voice exchanges, said communication network comprising:

a voice stream network that selectively routes voice signals captured in an analog voice stream form;

a voice packet network, independent of said first network, that selectively routes voice in a digital voice packet form;

a first network device that captures and delivers voice in the analog voice streams form, and said first network device receives and reproduces voice from the analog voice stream form;

a second network device, independent of said first network device, that communicatively couples with said first network device to receive and deliver voice in the analog voice stream form;

said second network device selectively interfaces with said voice stream network to receive and route voice for said first network device in the analog voice stream form;

said second network device selectively interfaces with said voice packet network to receive and route voice for said first network device in the digital voice packet form; and

said second network device converts voice between the analog voice stream form and the digital voice packet form when needed for routing voice between said first network device and said voice packet network.

16. The communication network of claim 15 wherein said voice stream network comprising a telephone switching network.

17. The communication network of claim 16 wherein said voice packet network uses a polling protocol and incorporates spanning tree routing.

18. The communication network of claim 15 wherein said first network device is a telephone that captures, delivers, receives and reproduces voice in an analog voice stream form.

19. The communication network of claim 18 wherein said second network device is a computer.

20. The communication network of claim 19 wherein said first network device is a telephone that captures, delivers, receives and reproduces voice in an analog voice stream form, and said voice packet network comprises an internet switching network.

21. The communication network of claim 15 wherein said second network device is an access device.